

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000626**Date Inspected:** 13-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Ye Yongjun & Zhu Zhonghai			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	Mock Up		

Summary of Items Observed:

Elevation 77:

Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe ZPMC Non Destructive Testing (NDT) Technicians Li Liming and E Shuiqin, performing Ultrasonic Testing (UT) of completed weld repairs on Sub-Assembly (SA) MUSA-MA1 Face E. There appeared to be no rejects found in the repaired welds. A Lam Scan was performed prior to scans with 45 degree and 70 degree transducers.

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the fabrication of the Mock Up. The QA Inspector randomly observed ZPMC Non Destructive Testing (NDT) Technician Cai Xin Xin utilizing the Magnetic Particle Testing Method (MT) to examine 25% of the Partial Joint Penetration (PJP) welds Weld Joint (WJ) numbers 11, 12, 13, and 14, attaching the connection plate piece mark 596 to longitudinal stiffeners piece marks mp8-1 and mp8-2, and WJ numbers 15, 16, 17 and 18 attaching connection plate piece mark p597 to longitudinal stiffeners piece marks mp3 and mp4 of Skin Plate D, Sub-Assembly MUSA-MA5. The QA Inspector also performed 10% MT verification examination of the same welds. There appeared to be no indications. The attached photograph provides additional detail.

Elevation 89:

The QA Inspector randomly observed welding being performed for the fabrication of the Mock Up at elevation 89.

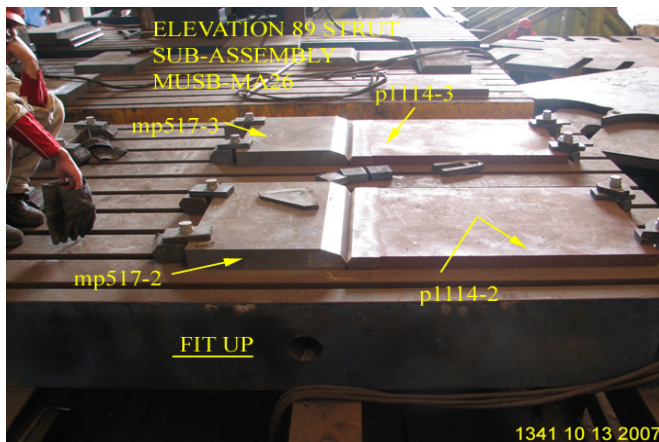
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The QA Inspector randomly observed ZPMC qualified welder Han Changou utilizing the Submerged Arc Welding (SAW) process to weld the seam weld on Skin Plate E, SA MUSB-MA38. Mr. Han was utilizing ZPMC approved Weld Procedure Specification (WPS) WPS-B-T-2221-B-U3C-S-1 for the 300 millimeter Complete Joint Penetration (CJP) section of the weld, and ZPMC approved WPS WPS-B-T-2321-B-P3-S-1 for the balance of the weld which was a Partial Joint Penetration (PJP) weld. The QA Inspector observed ZPMC CWI Zhu Zhonghai monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 635 amps, welding voltage 34 volts with a travel speed of 600 millimeters per minute for WJ 16. Weld parameters appeared to comply with the above approved ZPMC WPS's. The attached photograph provides additional detail.

The QA Inspector observed a ZPMC helper utilizing a grinder to remove slag and leftover weld metal after the burning off of the lifting lugs with carbon air arc Skin Plate D, SA MUSB-MA22. The attached photograph provides additional detail.

The QA Inspector observed ZPMC welding personnel fitting up Strut Sub-Assembly piece marks mp517-2 to p1114-2 and mp517-3 to p1114-3. The attached photograph provides additional detail.



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Summary of Conversations:

The QA Inspector asked ZPMC QA Representative Zhang Jiadi why there appeared to be no weld detail shown for the "T" type PJP WJ's 11, 12, 13 and 14 attaching connection plate piece mark p596 to longitudinal stiffeners piece marks mp8-1 and mp8-2 on Elevation 89 Skin Plate D, SA MUSA-MA5. Mr. Zhang conferred with several other ZPMC welding personnel and then informed the QA Inspector that he would check into it.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer
